Name _____ **Date** 12-12-14 **Period** _____

Using the Pythagorean Theorem in Word Problems - #1

Solve by drawing a picture, identifying a, b, and c, and applying the Pythagorean Theorem. Don't forget to give your answer with units!

1. Two sides of a right triangle are 8 and 12 in.
    a. Find the missing side if these are the lengths of the legs.

    b. Find the missing side if these are the lengths of a leg and hypotenuse.

2. The foot of a ladder is placed 6 feet from a wall. If the top of the ladder rests 8 feet up on the wall, how long is the ladder?

3. The bottom of a ladder must be placed 3 ft. from a wall. The ladder is 12 feet long. How far above the ground does the ladder touch the wall?

4. John leaves school to go home. He walks 6 blocks North and then 8 blocks west. How far is John from the school?

5. A 13 ft. ladder is placed 5 feet away from a wall. The distance from the ground straight up to the top of the wall is 13 ft. Will the ladder reach the top of the wall?

6. What is the length of the diagonal of a 10 cm by 15 cm rectangle?

7. A soccer field is a rectangle 90 meters wide and 120 meters long. The coach asks players to run from one corner to the corner diagonally across. What is this distance?

8. The area of a square is 81 square centimeters. First, find the length of a side. Then, find the length of the diagonal.

9. Donna's TV screen is 20 inches long. If the diagonal measures 25 inches, how long is the width of Donna's TV?

10. An isosceles (the legs are congruent) triangle has congruent sides of 20 cm. The base is 10 cm. Find the height of the triangle.

http://www.basic-mathematics.com/pythagorean-theorem-word-problems.html
http://www.regentsprep.org/Regents/math/ALGEBRA/AT1/PracPyth.htm
http://www.algebralab.org/practice/practice.aspx?file=word_pythagoreantheorem.xml
http://www.math-videos-online.com/Pythagorean-Theorem-Word-Problem.html
http://haw.bhusd.org/ourpages/users/jschmidt/Worksheets/Seventh%20Grade/py_thm_wp_ws_7.pdf
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